

**ROVER**<sup>®</sup>  
HIGH QUALITY CLIMATE



CATALOGUE

# ROVER VRF SYSTEMS

## ROVER VRF SYSTEMS ADVANTAGES



### FOR PROJECT ORGANIZATIONS AND CONSTRUCTORS

**FLEXIBILITY OF THE TRACK:** The high length of refrigerant pipes between indoor and outdoor units makes easier the installation adjustment to the configuration of the building; also the large distances between indoor and outdoor units allow to easily choose the best location for the condensing units.



**VERSATILE CONTROL SYSTEM:** The control system allows numerous combinations of individual control, group control and system control.



**EASY MODIFICATIONS AND IMPLEMENTATIONS:** If it was intended in the design phase, you can expand the system with the addition of indoor and outdoor units in a simple and practical way.



**FLEXIBLE MANAGEMENT:** The system can have a power ratio between indoor and outdoor units from 50% to 130%.



### FOR OWNERS AND INSTALLERS

**COST REDUCTION:** The system uses only two pipes (three in case of systems with heat recovery); the cost and installation time are thus reduced.



**EASY INSTALLATION OF CONTROL SYSTEMS:** The control system uses a transmission circuit formed by two wires without polarity; in this way, you avoid errors and significantly reduce the time required for the connection.



**MINIMAL INVASIVENESS IN THE BUILDING:** Pipes small sizes don't allow to excessively pollute the building in which the system will be installed. This advantage is particularly important in case of structures already existing or under renovation.



**INSTALLATION TIME REDUCTION:** The accessories for connecting pipes and the modular type of mounting facilitate and accelerate the time required for installation.



### FOR USERS AND MAINTENANCE ORGANIZATIONS

**CUSTOMIZED SELECTION:** The user can select at will the environmental conditions of each area or room to obtain an optimal climate.



**A COMFORTABLE ENVIRONMENT:** The temperature control reduces the time necessary to achieve the desired conditions, keeping them steadily.



**EASY USE OF THE REMOTE CONTROL:** Remote Control allows you to obtain very easily maximum performances from each indoor unit. You can easily select the operation mode (dry/cooling/heating/ventilation), the desired temperature, the air flow volume and direction etc.



**HIGH PERFORMANCE ROTARY COMPRESSORS:** The advanced design of the high performance compressors offers extended service life.

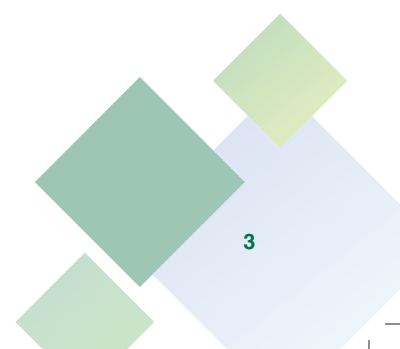


**SELF-DIAGNOSIS FUNCTION:** In case of failure, both the remote devices and the outdoor units provide the information necessary to become aware of the location and characteristics of the failure, reducing repair and maintenance time.



## ROVER VRF SYSTEMS

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ROVER VRF AIR CONDITIONING SYSTEMS

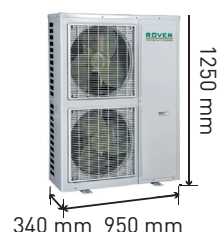
# CASTLE







## Mini VRF systems CASTLE series



*The Mini VRF DC Inverter System Castle is the new frontier of technology, specifically thought for residential and light commercial applications*

### DC INVERTER

High efficiency DC Inverter Compressor, circuit DCI PAM (DC Inverter Pulse Amplitude modulation), maximum of 9 indoor units connectable to 1 outdoor unit

### VRF

Variable Refrigerant Flow: continuous regulation of the refrigerant flow rate in the circuit of an air conditioning system able to give the best in term of comfort, with very high efficiency levels

### R410A

The most ecological and efficient refrigerant available for air conditioning systems of this level of thermal capacity

### COMPACT

Reduced dimensions of the outdoor unit

### WIDE RANGE

Three sizes available: 3,5-4-5 HP

### 150 m

Refrigerant circuit of a maximum length of 150 m, to be realized with a big save of time thanks to the reduced pipe dimension and to the simple tree structure that makes widening easy, not requiring any installation of expensive concentrator apparatus

### 220/240 VOLT

Single-phase (230/1/50) power supply

### LAN

(Local Area Network) For the interconnection of all the indoor/outdoor units and the system controls, realized with two wiring cables without polarization; the intelligent controllers are able to auto set all the units, simplifying and reducing to minimum the time-to-start

### SILENCE

Low sound levels thanks to the special fans and to the careful study of the air movements in suction

### WIDE LIMITS

The wide range of outdoor air temperature supported allows the operation even in extreme conditions: from +10 °C to +48 °C in cooling mode and from -20 °C to +27 °C in heating mode

### MATCHIN & CONTROLS

Indoor units, controllers (all optional) and accessories are the same for mini systems and 2 way systems of Castle series



Parameters		Models up to 20 kW
Maximum actual piping length, m		150
Maximum piping length between outdoor unit and most remote indoor unit (actual/equivalent), m (L)		70/80
Maximum equivalent piping length between first connection branch and most remote indoor unit, m (L <sub>1</sub> )		25
Maximum allowable elevation difference, m (H)	Outdoor unit is installed higher than indoor unit	30
	Outdoor unit is installed lower than indoor unit	25
Maximum allowable distance between indoor units, m (h)		10

Mini Outdoor units with inverter compressor		RVR-C-I100-E		RVR-C-I120-E		RVR-C-I140-E	
Features	units	Охл.	Обогрев	Охл.	Обогрев	Охл.	Обогрев
Cooling/Heating capacity	kW	10,0	11,0	12,0	14,0	14,0	15,4
	BTU/h	34170	37587	41004	47828	47828	52621,8
	kcal/h	8600	9460	10320	12040	12040	13244
EER/COP	(kW/kW)	3,49	4,23	3,42	4,11	3,21	3,8
Air flowrate (h.)	m³/h	6200		6200		6000	
Sound pressure level	dB(A)	58		58		58	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	kW	2,86/2,60		3,50/3,40		4,36/4,05	
Compressor type		DC Inverter		DC Inverter		DC Inverter	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8")		9,52 (3/8")		9,52 (3/8")	
Gas pipe diameter	mm (inch")	15,87(5/8")		15,87(5/8")		15,87(5/8")	
Max. number of connectable indoor units	no.	6		7		8	
Max. pipe length	m	150		150		150	
Gas standard charge	Kg	7,5		7,5		7,5	
Operating limits (cooling/heating)	°C	+10 ~ +48 / -20 ~ +27		+10 ~ +48 / -20 ~ +27		+10 ~ +48 / -20 ~ +27	
Max. distance between indoor units	m	10		10		10	
Max. height between units (outdoor on top)	m	30		30		30	
Max. height between units (indoor on top)	m	25		25		25	
Net weight outdoor	Kg	111		111		111	
Net dimension outdoor (HxWxD)	mm	1250x950x340		1250x950x340		1250x950x340	



## VRF systems CASTLE series



### DCI + SAC

DC Inverter Compressor + Scroll Constant Compressor, the perfect matching for a high efficiency system with capacity up to 200 kW, automatically modulated by the DC Inverter Pulse Amplitude Modulation circuit on a maximum of 64 indoor units connected.

### VRF

Variable Refrigerant Flow: continuous regulation of the refrigerant flow rate in the circuit of an air conditioning system able to give the best in term of comfort, with very high efficiency levels (COP up to 4,00)

### R410A

The most ecological and efficient refrigerant available for air conditioning systems of this level of thermal capacity

### TWO WAY

Two-way system with possibility of condensing and indoor units increase thanks to the simple tree refrigerant circuit.

### 500 m

Refrigerant circuit of a maximum length of 500 m, to be realized with a big save of time thanks to the reduced pipe dimension and to the simple tree structure that makes widening easy, not requiring any installation of expensive concentrator apparatus

### LAN

(Local Area Network) For the interconnection of all the indoor/outdoor units and the system controls, realized with

two wiring cables without polarization; the intelligent controllers are able to auto set all the units, simplifying and reducing to minimum the time-to-start

### LONG LIFE

A special electronic system controls the operating cycles of the compressors, distributing the load and extending the efficiency in the time.

### BACK UP

The system is able to activate the automatic back-up of the condensing units in error or stopped; the sophisticated control system compensates the bad operation of the blocked outdoor unit, distributing the thermal power to the outdoor units of the multiple configuration system.

### SILENCE

Sound levels are lower than 52 dB; thanks to the special fans and to the careful study of the air movements in suction

### WIDE RANGE

The wide range of outdoor air temperature supported allows the operation even in extreme conditions: from  $-5^{\circ}\text{C}$  to  $+48^{\circ}\text{C}$  in cooling mode and from  $-20^{\circ}\text{C}$  to  $+27^{\circ}\text{C}$  in heating mode

### FREE PLACE

The condensing units in multiple configuration can be installed at a distance of only 20 cm or very far one from the other, even on different stages of the building; this feature makes the system more adaptable to the various circumstances

## Outdoor units 2-Way Systems CASTLE series



- compactness, making units easier to position
- flexibility of installation
- high efficiency (COP at the top of the range: 3,90 average cooling/heating for the 8 HP units)
- reduced life cycle costs
- accurate capacity control
- wide range of control options

Parameters		Models 20–60 kW	Models over 60 kW
Maximum piping length, m		300	500
Maximum piping length between outdoor unit and most remote indoor unit (actual/equivalent), m (L)		100/125	150/175
Maximum equivalent piping length between first connection branch and most remote indoor unit, m (L <sub>e</sub> )		40	40
Maximum allowable elevation difference, m (H)	Outdoor unit is installed higher than indoor unit	50	50
	Outdoor unit is installed lower than indoor unit	40	40
Maximum allowable distance between indoor units, m (h)		15	15

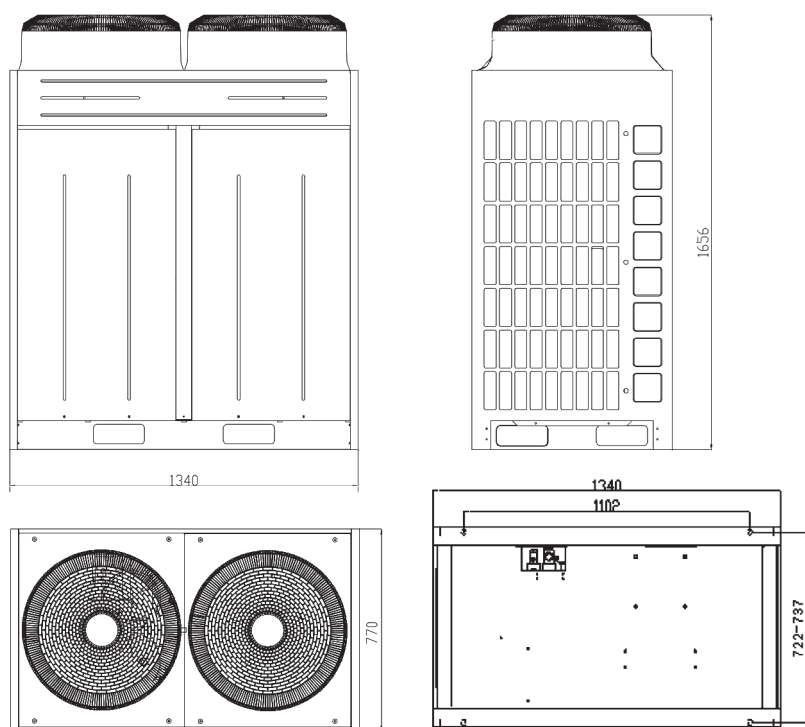
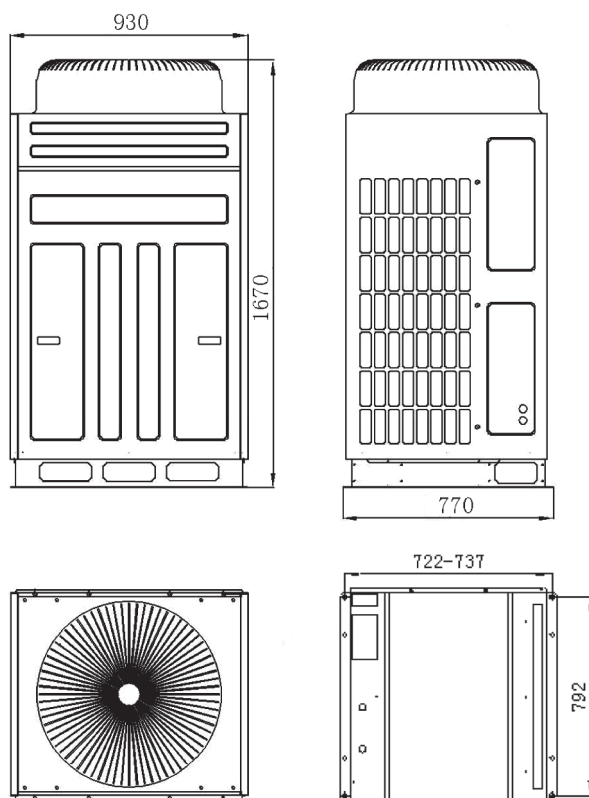
- Maximum number of outdoor units connectable: 4
- Maximum total power of the system: 200 kW
- Maximum number of indoor units connectable: 64
- DC Inverter Compressor + Scroll Constant Compressor, highly efficient at low rotation frequencies
- R410A HFC refrigerant
- Fan with direct current motor that allows a consumption reduction of about 50% and a speed modulation up to 16 steps in spite of the usual 4 steps of the alternate current motors; this performance increases the efficiency of the thermodynamic system which is able to best adapt to the variations of temperature and thermal load of the rooms
- The use of a special oil sensor allows, for the first time in the world, to keep under control the lubrication of the mechanical parts of the compressor
- Special air intakes allowed to unify the dimensions of the units, making easier the closing up for multiple installations in which two units can be placed at a distance of only 20 cm one from the other, the smaller distance available
- Low sound level thanks to a special fan made of resin and a particular resin grille, designed and used for these units in order to minimize air pressure drops
- New high efficient heat exchanger with three-way suction, divided in two sections with double control of defrosting cycle
- Pressure control automatic and by software on PC
- Equipped with fault-tolerant system granting in multiple installations the operation of the air conditioning system even in case of total stop of one condensing unit
- Support to long-life system that, in multiple installations, allows a cyclic use of the condensing units, granting a balance of the compressors activity
- Wide range of outdoor air temperature: from –5 °C до +48 °C in cooling mode and from –20 °C до +27 °C in heating mode
- Maximum length of the refrigerant circuit extended to 500 m
- The refrigerant circuit doesn't require distribution apparatus downstream of the unit as it can be realized with a tree structure using only the special distributor accessories; this feature facilitates any type of system widening, by adding both outdoor and indoor units
- Three-phase auto sense power supply 380–415/3N/50Hz





ROVER VRF SYSTEMS WITH DC INVERTER COMPRESSOR

Outdoor units 2-Way Systems CASTLE series



## Outdoor units 2-Way Systems CASTLE series

Outdoor units 2-Way Systems Castle series		RVR-C-Im224-D2	RVR-C-Im280-D2	RVR-C-Im335-D2
Cooling/Heating capacity	kW	22,40 / 25,00	28,00 / 31,50	33,50 / 37,50
EER/COP	(kW/kW)	4,05/4,29	3,73/4,09	3,64/3,98
Air flowrate (h.)	m <sup>3</sup> /h	10000	10000	13000
Sound pressure level	dB(A)	58	58	60
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	5,52 / 5,82	7,50 / 7,70	9,20 / 9,40
Running current	A	9,90 / 10,40	13,40 / 13,80	16,50 / 16,80
Compressor type		DC Inverter + Scroll Constant	DC Inverter + Scroll Constant	DC Inverter + Scroll Constant x 2
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch)	9,52 (3/8")	9,52 (3/8")	12,70 (1/2")
Gas pipe diameter (suction)	mm (inch)	22,23 (7/8")	22,23 (7/8")	28,57 (1 1/8")
Diameter of balancing pipe	mm (inch)	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	300	300	300
Gas standard charge	Kg	12	13	15
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	14	16	16
Max. height between units (outdoor on top)	m	50	50	50
Max. height between units (indoor on top)	m	40	40	40
Net weight outdoor	Kg	255	255	350
Net dimension outdoor (HxWxD)	mm	1670x930x770	1670x930x770	1670x1340x770

\* Without additional charges switching (option)

Outdoor units 2-Way Systems Castle series		RVR-C-Im400-D2	RVR-C-Im450-D2
Cooling/Heating capacity	kW	40,00 / 45,00	45,00 / 50,00
EER/COP	(kW/kW)	3,21/4,01	3,14/3,59
Air flowrate (h.)	m <sup>3</sup> /h	13000	13000
Sound pressure level	dB(A)	61	62
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	12,45 / 11,20	14,32 / 13,90
Running current	A	22,30 / 20,0	25,60 / 24,9
Compressor type		DC Inverter + Scroll Constant x 2	DC Inverter + Scroll Constant x 2
Refrigerant type		R410A	R410A
Liquid pipe diameter	mm (inch)	12,70 (1/2")	12,70 (1/2")
Gas pipe diameter (suction)	mm (inch)	28,57 (1-1/8")	28,57 (1-1/8")
Diameter of balancing pipe	mm (inch)	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	300	300
Gas standard charge	Kg	16	17
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	16	16
Max. height between units (outdoor on top)	m	50	50
Max. height between units (indoor on top)	m	40	40
Net weight outdoor	Kg	350	370
Net dimension outdoor (HxWxD)	mm	1670x1340x770	1670x1340x770

\* Without additional charges switching (option)



## Outdoor units matchings — 2-Way Systems CASTLE series

### Modular systems

Outdoor units 2-Way Systems Castle series		18 HP 224+280	20 HP 280+280	22 HP 280+335
Cooling/Heating capacity	kW	50,40/56,50	56,00/63,00	61,50/69,00
EER/COP	[kW/kW]	3,84/4,18	3,7/4,09	3,68/4,03
Air flowrate (h.)	m <sup>3</sup> /h	10000x2	10000x2	10000 + 13000
Sound pressure level	dB(A)	62	62	62
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	13/13,5	15,0/15,4	16,7/17,1
Running current	A	22,3/24,2	26,8/27,6	29,9/30,6
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410A	R410A	R410A
Liquid pipe diameter	mm (inch")	15,88(5/8")	15,88(5/8")	15,88(5/8")
Gas pipe diameter (suction)	mm (inch")	28,58(1-1/8")	28,58(1-1/8")	28,58(1-1/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	300	300	500
Gas standard charge	Kg	12,0+13,0	13,0x2	13,0+15,0
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	30	32	32
Net weight outdoor	Kg	255+255	255+255	255+350
Net dimension outdoor (HxWxD)	mm	(1670x930x770) +(1670x930x770)	(1670x930x770) +(1670x930x770)	(1670x930x770) +(1670x1340x770)

\* Without additional charges switching (option)

Outdoor units 2-Way Systems Castle series		24 HP 280+400	26 HP 280+450	28 HP 335+450
Cooling/Heating capacity	kW	68,0/76,5	73,0/81,5	78,5/87,5
EER/COP	[kW/kW]	3,4/4,04	3,3/3,7	3,34/3,75
Air flowrate (h.)	m <sup>3</sup> /h	10000 + 13000	10000 + 13000	13000x2
Sound pressure level	dB(A)	62	63	63
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	20,0/18,9	21,8/21,6	23,5/23,3
Running current	A	35,7/33,8	39,0/38,7	42,1/41,6
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410A	R410A	R410A
Liquid pipe diameter	mm (inch")	15,88(5/8")	19,05(3/4")	19,05(3/4")
Gas pipe diameter (suction)	mm (inch")	28,58(1-1/8")	34,92(1-3/8")	34,92(1-3/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	13,0+16,0	13,0+17,0	15,0+16,0
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	32	32	32
Net weight outdoor	Kg	255+350	255+370	350+370
Net dimension outdoor (HxWxD)	mm	(1670x930x770) +(1670x1340x770)	(1670x930x770) +(1670x1340x770)	(1670x1340x770) +(1670x1340x770)

\* Without additional charges switching (option)

Outdoor units 2-Way Systems Castle series		30 HP 400+450	32 HP 450+450	34 HP 280+280+400
Cooling/Heating capacity	kW	85,0/95,0	90,0/100,0	96,0/108,0
EER/COP	[kW/kW]	3,17/3,78	3,14/3,59	3,49/4,06
Air flowrate (h.)	m <sup>3</sup> /h	13000x2	13000x2	10000x2+13000
Sound pressure level	dB(A)	63	63	64
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	26,8/25,1	28,6/27,8	27,5/26,6
Running current	A	48,0/44,9	51,2/49,8	49,1/47,6
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch")	19,05(3/4")	19,05(3/4")	19,05(3/4")
Gas pipe diameter (suction)	mm (inch")	34,92(1-3/8")	34,92(1-3/8")	34,92(1-3/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	16+17	17+17	13+13+16
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	32	32	48
Net weight outdoor	Kg	350+370	370+370	255+255+350
Net dimension outdoor (HxWxD)	mm	(1670x1340x770) +(1670x1340x770)	(1670x1340x770) +(1670x1340x770)	(1670x930x770) +(1670x930x770) +(1670x1340x770)

\* Without additional charges switching (option)

## Outdoor units matchings — 2-Way Systems CASTLE series

### Modular systems

Outdoor units 2-Way Systems Castle series		36 HP 280+280+450	38 HP 280+335+450	40 HP 280+400+450
Cooling/Heating capacity	kW	101,0/113,0	106,5/119,0	113,0/126,5
EER/COP	[kW/kW]	3,44/3,85	3,43/3,83	3,29/3,85
Air flowrate [h.]	m³/h	10000x2+13000	10000+13000x2	10000+13000x2
Sound pressure level	dB(A)	64	64	64
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption [cooling/heating]	kW	29,3/29,3	31,0/31,0	34,3/32,8
Running current	A	52,4/52,5	55,5/55,5	61,3/58,7
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch")	19,05(3/4")	19,05(3/4")	19,05(3/4")
Gas pipe diameter (suction)	mm (inch")	41,27(1-5/8")	41,27(1-5/8")	41,27(1-5/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	13+13+17	13+15+17	13+16+17
Operating limits [cooling/heating]	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	48	48	48
Net weight outdoor	Kg	255+255+370 (1670x930x770) +(1670x930x770) +(1670x1340x770)	255+350+370 (1670x930x770) +(1670x1340x770) +(1670x1340x770)	255+350+370 (1670x930x770) +(1670x1340x770) +(1670x1340x770)
Net dimension outdoor (HxWxD)	mm			

\* Without additional charges switching (option)

Outdoor units 2-Way Systems Castle series		42 HP 280+450+450	44 HP 335+450+450	46 HP 400+450+450
Cooling/Heating capacity	kW	118,0/131,5	123,5/137,5	130,0/145,0
EER/COP	[kW/kW]	3,26/3,7	3,26/3,69	3,16/3,7
Air flowrate [h.]	m³/h	10000+13000x2	13000x3	13000x3
Sound pressure level	dB(A)	64	65	65
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption [cooling/heating]	kW	36,1/35,5	37,8/37,2	41,1/39,0
Running current	A	64,6/63,6	67,7/66,6	73,5/69,8
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch")	19,05(3/4")	19,05(3/4")	19,05(3/4")
Gas pipe diameter (suction)	mm (inch")	41,27(1-5/8")	41,27(1-5/8")	41,27(1-5/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	13+17+17	15+17+17	16+17+17
Operating limits [cooling/heating]	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	48	48	48
Net weight outdoor	Kg	255+350+370 (1670x930x770) +(1670x1340x770) +(1670x1340x770)	350+370+370 (1670x1340x770) +(1670x1340x770) +(1670x1340x770)	350+370+370 (1670x1340x770) +(1670x1340x770) +(1670x1340x770)
Net dimension outdoor (HxWxD)	mm			

\* Without additional charges switching (option)

Outdoor units 2-Way Systems Castle series		48 HP 450+450+450	50 HP 280+280+400+450	52 HP 280+280+450+450
Cooling/Heating capacity	kW	135,0/150,0	141,0/158,0	146,0/163,0
EER/COP	[kW/kW]	3,14/3,59	3,37/3,9	3,34/3,77
Air flowrate [h.]	m³/h	13000x3	10000x2+13000x2	10000x2+13000x2
Sound pressure level	dB(A)	65	65	65
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption [cooling/heating]	kW	42,9/41,7	41,8/40,5	43,6/43,2
Running current	A	76,8/74,7	74,7/72,5	78,0/82,4
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch")	19,05(3/4")	22,23(7/8")	22,23(7/8")
Gas pipe diameter (suction)	mm (inch")	41,27(1-5/8")	44,45(1-3/4")	44,45(1-3/4")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	17+17+17	13+13+16+17	13+13+17+17
Operating limits [cooling/heating]	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	48	64	64
Net weight outdoor	Kg	370+370+370 (1670x1340x770) +(1670x1340x770) +(1670x1340x770)	255+255+350+370 (1670x930x770) +(1670x930x770) +(1670x1340x770) +(1670x1340x770)	255+255+350+370 (1670x930x770) +(1670x930x770) +(1670x1340x770) +(1670x1340x770)
Net dimension outdoor (HxWxD)	mm			

\* Without additional charges switching (option)





## Outdoor units matchings — 2-Way Systems CASTLE series

### Modular systems

Outdoor units 2-Way Systems Castle series		54 HP 280+335+450+450	56 HP 280+400+450+450	58 HP 280+450+450+450
Cooling/Heating capacity	kW	151,5/169,0	155,0/176,5	163,0/181,5
EER/COP	(kW/kW)	3,34/3,76	3,18/3,77	3,23/3,67
Air flowrate (h.)	m³/h	10000+13000x3	10000+13000x3	10000+13000x3
Sound pressure level	dB(A)	65	65	65
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	45,3/44,9	48,6/46,7	50,4/49,4
Running current	A	81,1/80,4	86,9/83,6	90,2/88,5
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch")	22,23(7/8")	22,23(7/8")	25,4(1")
Gas pipe diameter (suction)	mm (inch")	44,45(1-3/4")	44,45(1-3/4")	53,97(1-7/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	13+15+17+17	13+16+17+17	13+17+17+17
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	64	64	64
Net weight outdoor	Kg	255+350+370+370	255+350+370+370	255+370+370+370
Net dimension outdoor (HxWxD)	mm	(1670x930x770) +(1670x1340x770) +(1670x1340x770) +(1670x1340x770)	(1670x930x770) +(1670x1340x770) +(1670x1340x770) +(1670x1340x770)	(1670x930x770) +(1670x1340x770) +(1670x1340x770) +(1670x1340x770)

\* Without additional charges switching (option)

Outdoor units 2-Way Systems Castle series		60 HP 335+450+450+450	62 HP 400+450+450+450	64 HP 450+450+450+450
Cooling/Heating capacity	kW	168,5/187,5	175,0/195,0	180,0/200,0
EER/COP	(kW/kW)	3,23/3,66	3,15/3,68	3,14/3,59
Air flowrate (h.)	m³/h	13000x4	13000x4	13000x4
Sound pressure level	dB(A)	65	65	65
Power supply	V/Ph/Hz	3/380-415/50	3/380-415/50	3/380-415/50
Running consumption (cooling/heating)	kW	52,1/51,1	55,4/52,9	57,2/55,6
Running current	A	93,3/91,5	99,1/94,7	102,4/99,6
Compressor type		DC Inverter + Scroll Constant		
Refrigerant type		R410	R410	R410
Liquid pipe diameter	mm (inch")	25,4(1")	25,4(1")	25,4(1")
Gas pipe diameter (suction)	mm (inch")	53,97(2-1/8")	53,97(2-1/8")	53,97(2-1/8")
Diameter of balancing pipe	mm (inch")	12,70 (1/2")	12,70 (1/2")	12,70 (1/2")
Max. pipe length	m	500	500	500
Gas standard charge	Kg	15+17+17+17	16+17+17+17	17+17+17+17
Operating limits (cooling/heating)	°C	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27	-5 ~ +48 / -20 ~ +27
Max. number of connectable indoor units*	no.	64	64	64
Net weight outdoor	Kg	350+370+370+370	350+370+370+370	370+370+370+370
Net dimension outdoor (HxWxD)	mm	(1670x1340x770) +(1670x1340x770) +(1670x1340x770) +(1670x1340x770)	(1670x1340x770) +(1670x1340x770) +(1670x1340x770) +(1670x1340x770)	(1670x1340x770) +(1670x1340x770) +(1670x1340x770) +(1670x1340x770)

\* Without additional charges switching (option)

## Wall-mounted Indoor units CASTLE series

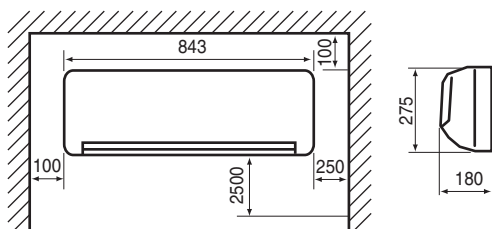


- Wall-mounted indoor unit for Mini Castle and Castle VRF DC Inverter systems
- Streamlined design including integrated electronic expansion valve for spaces without ceiling
- Anti cool air design. When heating in winter, intelligent anti cool air function is started. Unit only blows when inside the unit is pre-heated to prevent cool air from blowing out
- Vertical auto swing. When cooling, cool air is directed across the room and then sinks. When heating, warm air is directed across the floor and then rises

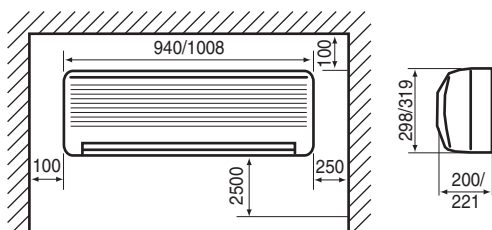
- The front grille can be easily removed for washing
- Advanced irregular-distance mixed flow fan. The operation is highly efficient and noise is lower
- Auto clean. After unit off with ON/OFF button, the indoor fan would still operate in low speed to ventilate and dry the inner components and parts to prevent mould and odor growing
- Ternary air filters with anti-mildew, static electric dust capture and anti-bacterial function



## Wall-mounted Indoor units CASTLE series



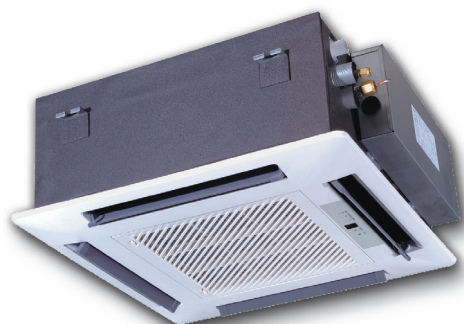
Wall-mounted indoor units CASTLE series		RVR-C-W22-E		RVR-C-W28-E	
Features	units	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	2,2	2,5	2,8	3,2
	BTU/h	7500	8500	9550	10900
	kcal/h	1890	2150	2400	2750
Air flowrate indoor	m <sup>3</sup> /h	500		500	
Sound pressure level (h/m/l)	dB(A)	37/34/28		37/34/28	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	20		20	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)	
Net weight indoor	Kg	10,5		10,5	
Net dimension indoor (HxWxD)	mm	843x180x275		843x180x275	



Wall-mounted indoor units CASTLE series		RVR-C-W36-E		RVR-C-W45-E		RVR-C-W50-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	3,6	4,0	4,5	5,0	5,0	6,3
	BTU/h	12300	13650	15400	17100	17100	21550
	kcal/h	3100	3450	3850	4300	4300	5400
Air flowrate indoor	m <sup>3</sup> /h	630		630		630	
Sound pressure level (h/m/l)	dB(A)	41/35/29		43/37/34		44/41/38	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	20		20		20	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	12,70 (1/2)		12,70 (1/2)		12,70 (1/2)	
Net weight indoor	Kg	13		13		13	
Net dimension indoor (HxWxD)	mm	940x200x298		940x200x298		940x200x298	

Wall-mounted indoor units CASTLE series		RVR-C-W56-E		RVR-C-W63-E		RVR-C-W71-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	5,6	6,3	6,3	7,1	7,1	8,0
	BTU/h	19150	21550	21550	24250	24250	27350
	kcal/h	4800	5400	5400	6100	6100	6900
Air flowrate indoor	m <sup>3</sup> /h	800		800		800	
Sound pressure level (h/m/l)	dB(A)	44/41/38		44/41/38		44/41/38	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	30		30		30	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	18,88 (5/8)		18,88 (5/8)		18,88 (5/8)	
Net weight indoor	Kg	15		15		15	
Net dimension indoor (HxWxD)	mm	1008x221x319		1008x221x319		1008x221x319	

## Four-way cassette indoor units EURO type CASTLE series



- Cassette indoor unit for Mini Castle и Castle VRF systems with DC inverter compressor
- Low noise fan wheels with 3-dimensional blade
- Full automatic operation, 4-way air supply, 3-speed fan setting and strong circulating air flow volume make the cooling of hot air directly reach every corner of the room, even if the ceiling is higher than standard height
- Units below 7,1 kW are applicable to the height below 3 m
- Units above 8 kW are applicable to the height below 4,5 m
- Air supply in different directions with 30-60 degree sweep for even temperature distribution
- Designed with fresh air baffle for fresh air introduction
- Long life washable filters

Cassette indoor units CASTLE series		RVR-C-TA22-E		RVR-C-TA28-E	
Features	units	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	2,20	2,50	2,80	3,20
	BTU/h	7500	8500	9550	10900
	kcal/h	1900	2150	2400	2750
Air flowrate indoor	m <sup>3</sup> /h	600		600	
Sound pressure level (h/l) in 2 m	dB(A)	37/34		37/34	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	11		11	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)	
Net weight indoor/grille	Kg	20/5		20/5	
Net dimension indoor (HxWxD)	mm	570x570x230		570x570x230	
Net dimension grille (HxWxD)	mm	650x650x50		650x650x50	

Cassette indoor units CASTLE series		RVR-C-TA36-E		RVR-C-TA45-E	
Features	units	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	3,60	4,00	4,50	5,00
	BTU/h	12280	14320	16020	17740
	kcal/h	3100	3610	4040	4470
Air flowrate indoor	m <sup>3</sup> /h	600		600	
Sound pressure level (h/l) in 2 m	dB(A)	37/34		37/34	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	11		11	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	12,70 (1/2)		12,70 (1/2)	
Net weight indoor/grille	Kg	20/5		20/5	
Net dimension indoor (HxWxD)	mm	570x570x230		570x570x230	
Net dimension grille (HxWxD)	mm	650x650x50		650x650x50	



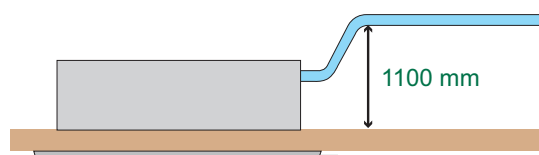
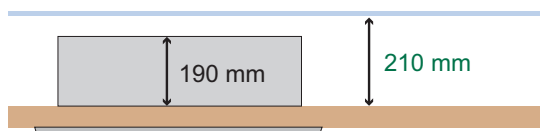
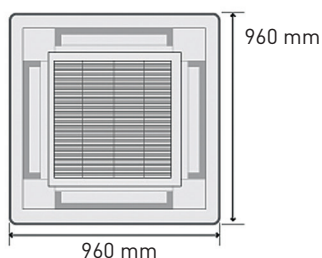
## Four-way cassette indoor units CASTLE series



## Main distinction between different types of cassette indoor units

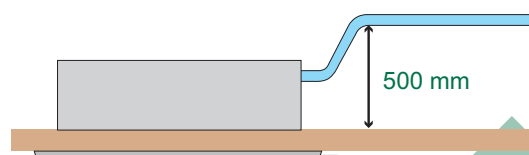
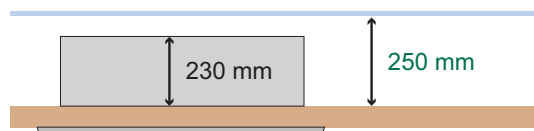
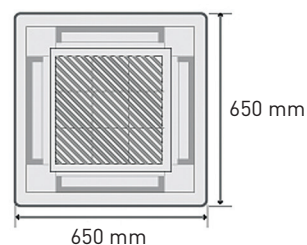
### Four-way cassette indoor units (T28–T140)

- Compact, light weight and square panel for easy installation
- Slim unit below 5,0 kW is only 190 mm in thickness, which can be installed in narrow ceiling space of at least 210 mm
- New drain pump fitted as standard with increased lift of 1100 mm



### Compact four-way cassette indoor units EURO type (TA22–TA45)

- Compact size of 650x650 mm
- Only 230 mm in thickness which can be installed in ceiling space of at least 250 mm
- New drain pump fitted as standard with increased lift of 500 mm



## Four-way cassette indoor units CASTLE series

Cassette indoor units CASTLE series		RVR-C-T28-E		RVR-C-T36-E		RVR-C-T45-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	2,8	3,2	3,6	4,0	4,5	5,0
	BTU/h	9550	10950	12300	13650	15350	17100
	kcal/h	2400	2750	3100	3450	3850	4300
Air flowrate indoor	m <sup>3</sup> /h	680		680		680	
Sound pressure level (h/m/l)	dB(A)	37/35/33		37/35/33		37/35/33	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	35		35		35	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		12,70 (1/2)		12,70 (1/2)	
Net weight indoor/grille	Kg	25/6,5		25/6,5		25/6,5	
Net dimension indoor (HxWxD)	mm	840x840x190		840x840x190		840x840x190	
Net dimension grille (HxWxD)	mm	950x950x60		950x950x60		950x950x60	

Cassette indoor units CASTLE series		RVR-C-T50-E		RVR-C-T56-E		RVR-C-T71-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	5,0	5,8	5,6	6,3	7,1	8,0
	BTU/h	17050	19800	19150	21500	24230	27300
	kcal/h	4300	5000	4800	5400	6050	6850
Air flowrate indoor	m <sup>3</sup> /h	680		1180		1180	
Sound pressure level (h/m/l)	dB(A)	37/35/33		39/37/35		39/37/35	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	35		35		35	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	12,70 (1/2)		15,88 (5/8)		15,88 (5/8)	
Net weight indoor/grille	Kg	25/6,5		30/6,5		30/6,5	
Net dimension indoor (HxWxD)	mm	840x840x190		840x840x240		840x840x240	
Net dimension grille (HxWxD)	mm	950x950x60		950x950x60		950x950x60	

Cassette indoor units CASTLE series		RVR-C-T90-E		RVR-C-T100-E		RVR-C-T112-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	9,0	10,0	10,0	11,0	11,2	12,5
	BTU/h	30750	34150	34150	37600	38250	42700
	kcal/h	7750	8600	8600	9450	9650	10750
Air flowrate indoor	m <sup>3</sup> /h	1860		1860		1860	
Sound pressure level (h/m/l)	dB(A)	40/38/36		40/38/36		40/38/36	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	60		60		60	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	15,88 (5/8)		15,88 (5/8)		15,88 (5/8)	
Net weight indoor/grille	Kg	38/6,5		38/6,5		38/6,5	
Net dimension indoor (HxWxD)	mm	840x840x320		840x840x320		840x840x320	
Net dimension grille (HxWxD)	mm	950x950x60		950x950x60		950x950x60	

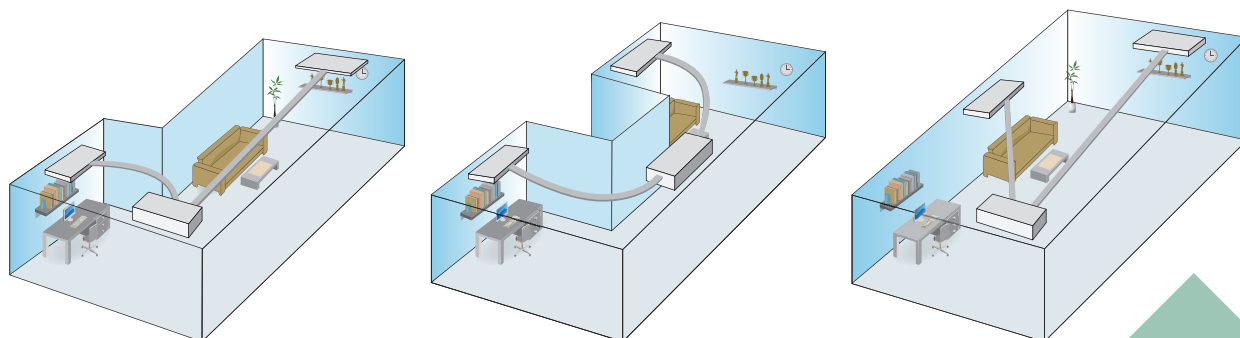
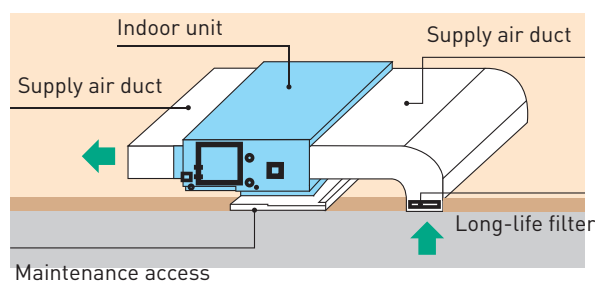
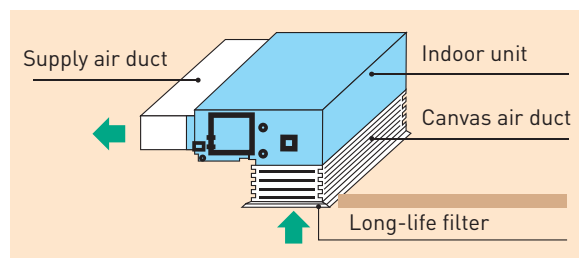
Cassette indoor units CASTLE series		RVR-C-T140-E	
Features	units	Cooling	Heating
Cooling/Heating capacity	kW	14,0	14,5
	BTU/h	47850	49550
	kcal/h	12050	12450
Air flowrate indoor	m <sup>3</sup> /h	1860	
Sound pressure level (h/m/l)	dB(A)	40/38/36	
Power supply	V/Ph/Hz	1/220-240/50	
Running consumption	W	60	
Refrigerant type		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8)	
Gas pipe diameter	mm (inch")	15,88 (5/8)	
Net weight indoor/grille	Kg	38/6,5	
Net dimension indoor (HxWxD)	mm	840x840x320	
Net dimension grille (HxWxD)	mm	950x950x60	



## Duct indoor units CASTLE series



- Ducted indoor unit for Mini Castle и Castle VRF systems with DC inverter compressor
- Highly flexible installation is possible due to various connection options
- Flexible and easy to install in type-L, type-U and large rooms
- Fresh air function option for 5,6 kW and above units
- Drain pump lift reaches 1000 mm
- Easy maintenance
- Long life washable filter with buckles can be easily disassembled from each direction
- Compact size was achieved by significantly reducing the width of the outdoor units
- Higher ESP and lower noise
- Key-card control



## Duct indoor units CASTLE series

Duct indoor units CASTLE series		RVR-C-D22-E		RVR-C-D28-E		RVR-C-D36-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	2,20	2,50	2,80	3,20	3,60	4,00
	BTU/h	7500	8500	9550	10900	12300	14300
	kcal/h	1900	2150	2400	2750	3100	3600
Air flowrate indoor	m³/h	450		570		570	
External static pressure (min/max)	mm W. G.	20/50		20/50		20/50	
Sound pressure indoor at ducts exit	dB(A)	33/35/37		35/37/39		35/37/39	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	40		60		60	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)		12,7 (1/2)	
Net weight indoor	Kg	28,5		30,5		30,5	
Net dimension indoor (HxWxD)	mm	880x665x250		880x665x250		880x665x250	

Duct indoor units CASTLE series		RVR-C-D45-E		RVR-C-D56-E		RVR-C-D71-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	4,50	5,00	5,60	6,30	7,00	8,00
	BTU/h	16000	17750	19100	21500	21850	23900
	kcal/h	4050	4450	4800	5400	5500	6000
Air flowrate indoor	m³/h	700		1000		1100	
External static pressure (min/max)	mm W. G.	20/50		30/60		30/60	
Sound pressure indoor at ducts exit	dB(A)	36/38/40		40/42/44		41/43/45	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	70		150		150	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	12,7 (1/2)		15,88 (5/8)		15,88 (5/8)	
Net weight indoor	Kg	36		51		51	
Net dimension indoor (HxWxD)	mm	981x721x266		1155x756x300		1155x756x300	

Duct indoor units CASTLE series		RVR-C-D90-E		RVR-C-D112-E		RVR-C-D140-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	9,0	10,0	11,2	12,5	14,0	15,0
	BTU/h	30750	34150	38250	42700	47850	51250
	kcal/h	7750	8600	9650	10750	12050	12900
Air flowrate indoor	m³/h	1700		1700		2000	
External static pressure (min/max)	mm W. G.	40/80		40/80		50/100	
Sound pressure indoor at ducts exit	dB(A)	44/46/48		44/46/48		46/48/50	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	225		225		260	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	15,88 (5/8)		15,88 (5/8)		15,88 (5/8)	
Net weight indoor	Kg	64		64		65,5	
Net dimension indoor (HxWxD)	mm	1425x736x300		1425x736x300		1385x736x300	

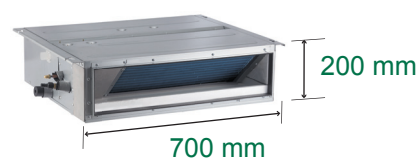
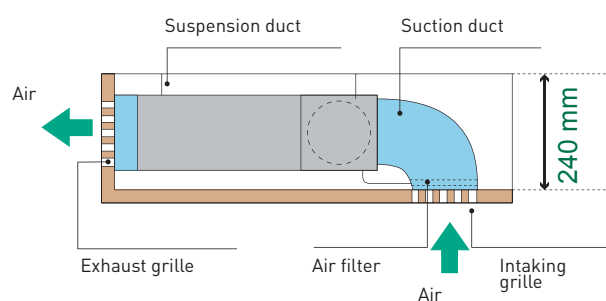




## Slim ducted indoor units CASTLE series



- Slim ducted indoor unit for Mini Castle и Castle VRF systems with DC inverter compressor
- Only 700 mm in width, 200 mm in height and 22 kg in weight (for 2,2 и 2,8 kW units). Slim units can be installed in rooms with as little as 240 mm depth between the drop-ceiling and ceiling slab
- Highly flexible installation is possible due to various duct connection options
- Plastic propeller housing, fan blade and intelligent-designed air-channel ensure air flow volume with lower operation noise
- Drain pump lift reaches 1000 mm



## Slim duct indoor units CASTLE series

Slim duct indoor units CASTLE series		RVR-C-DS22-E		RVR-C-DS28-E	
Features	units	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	2,20	2,50	2,80	3,20
	BTU/h	7500	8500	9550	10900
	kcal/h	1900	2150	2400	2750
Air flowrate indoor	m <sup>3</sup> /h	450		450	
Sound pressure level [h/m/l] in 2 m	dB(A)	37/35/33		37/35/33	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	30		30	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)	
Net weight indoor	Kg	21		21	
Net dimension indoor (HxWxD)	mm	700x615x200		700x615x200	

Slim duct indoor units CASTLE series		RVR-C-DS36-E		RVR-C-DS45-E	
Features	units	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	3,60	4,00	4,50	5,00
	BTU/h	12300	14300	16050	17750
	kcal/h	3100	3610	4040	4470
Air flowrate indoor	m <sup>3</sup> /h	550		700	
Sound pressure level [h/m/l] in 2 m	dB(A)	39/37/35		40/38/36	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	40		60	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	12,70 (1/2)		12,70 (1/2)	
Net weight indoor	Kg	22		26	
Net dimension indoor (HxWxD)	mm	700x615x200		900x615x200	

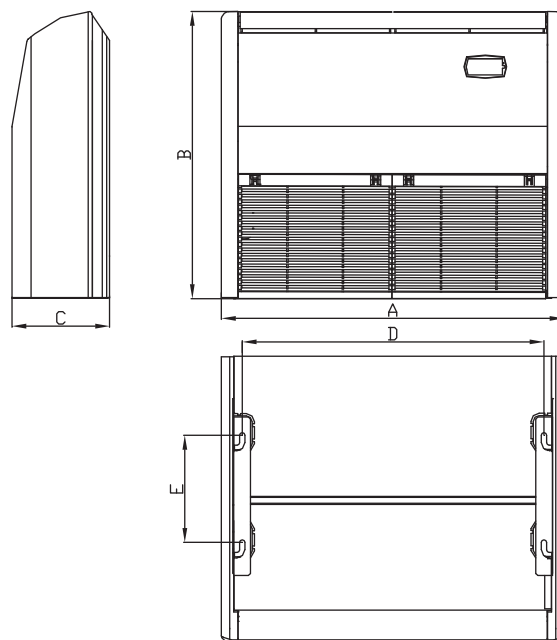
Slim duct indoor units CASTLE series		RVR-C-DS56-E		RVR-C-DS71-E	
Features	units	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	5,60	6,30	7,10	8,00
	BTU/h	19100	21480	21850	23850
	kcal/h	4800	5400	5500	6000
Air flowrate indoor	m <sup>3</sup> /h	700		1000	
Sound pressure level [h/m/l] in 2 m	dB(A)	41/39/37		42/40/38	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	60		200	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	15,88 (5/8)		15,88 (5/8)	
Net weight indoor	Kg	26		26	
Net dimension indoor (HxWxD)	mm	900x615x200		1100x615x200	



## Floor/ceiling indoor units CASTLE series



- Floor/ceiling indoor unit for Mini Castle и Castle VRF systems with DC inverter compressor
- Compact and light weight
- Ultra quiet operation
- Long life detachable and washable grille
- Easy to install and good looking, satisfies various requirements
- Easy maintenance
- Convenient disassembly and maintenance thanks to unique design
- Wide discharge range
- Effectively wide air supply range with cross-direction sweep



A	B	C	D	E
840	695	238	745	260
840	695	238	745	260
840	695	238	745	260
1300	600	188	1220	260
1590	695	238	1500	260
1590	695	238	1500	260
1590	695	238	1500	260

## Floor/ceiling indoor units CASTLE series

Floor/ceiling indoor units CASTLE series		RVR-C-FC28-E		RVR-C-FC36-E		RVR-C-FC50-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
	kW	2,80	3,20	3,60	4,00	5,0	5,8
Cooling/Heating capacity	BTU/h	9550	10950	12280	14320	17050	19800
	kcal/h	2400	2750	3100	3610	4300	5000
Air flowrate indoor	m <sup>3</sup> /h	650		650		950	
Sound pressure level [h/m/l] in 2 m	dB(A)	43/40/38		44/41/38		48/45/43	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	10		10		20	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		12,70 (1/2)		12,70 (1/2)	
Net weight indoor	Kg	40		40		40	
Net dimension indoor (HxWxD)	mm	1220x700x225		1220x700x225		1220x700x225	

Floor/ceiling indoor units CASTLE series		RVR-C-FC71-E		RVR-C-FC90-E		RVR-C-FC112-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
	kW	7,1	8,0	9,0	10,0	11,2	12,5
Cooling/Heating capacity	BTU/h	24250	27350	30710	34120	38250	42750
	kcal/h	6100	6900	6900	7750	9650	10750
Air flowrate indoor	m <sup>3</sup> /h	1400		1600		2000	
Sound pressure level [h/m/l] in 2 m	dB(A)	51/49/44		51/49/44		54/50/46	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	75		150		180	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	15,88 (5/8)		15,88 (5/8)		15,88 (5/8)	
Net weight indoor	Kg	52		54		64	
Net dimension indoor (HxWxD)	mm	1420x700x245		1420x700x245		1700x700x245	

Floor/ceiling indoor units CASTLE series		RVR-C-FC125E		RVR-C-FC140-E	
Features	units	Cooling	Heating	Cooling	Heating
	kW	12,5	13,5	14,0	16,0
Cooling/Heating capacity	BTU/h	42750	46150	47850	54650
	kcal/h	10750	11600	12050	13750
Air flowrate indoor	m <sup>3</sup> /h	2000		2000	
Sound pressure level [h/m/l] in 2 m	dB(A)	55/51/47		55/51/47	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50	
Running consumption	W	180		180	
Refrigerant type		R410A		R410A	
Liquid pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)	
Gas pipe diameter	mm (inch")	15,88 (5/8)		15,88 (5/8)	
Net weight indoor	Kg	66		66	
Net dimension indoor (HxWxD)	mm	1700x700x245		1700x700x245	



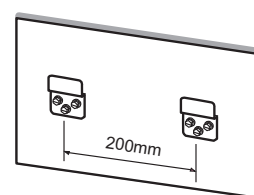
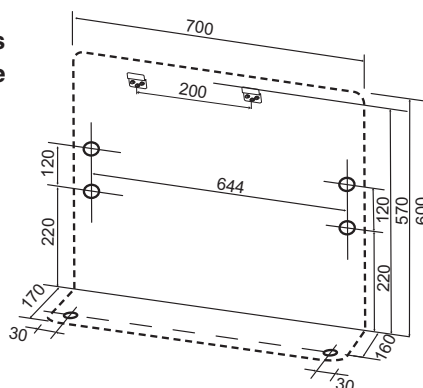
## Underceiling indoor units CASTLE series






















































































- Underceiling indoor unit for Mini Castle и Castle VRF systems
- Special function during heat pump start-up and defrosting cycle to avoid cool air emission in the room
- To be managed by the wired and wireless controllers of the Castle VRF systems with DC Inverter Compressor (optional)
- Night set back capability
- Dry function
- Centrifugal fan by remote control, granting a better and low noise air diffusion
- Horizontal flap swinging or to be set on a fixed position by remote control
- Vertical flap by manual control
- Dynamic refrigerant control by DC Inverter Compressor, managed by powerful microprocessor

Underceiling indoor units CASTLE series		RVR-C-C28-E		RVR-C-C36-E		RVR-C-C50-E	
Features	units	Cooling	Heating	Cooling	Heating	Cooling	Heating
Cooling/Heating capacity	kW	2,8	3,2	3,6	4,0	5,0	5,5
	BTU/h	9550	10950	12300	13650	17100	18800
	kcal/h	2400	2750	3100	3450	4300	4750
Air flowrate indoor (h/m/l)	m³/h	500/370/280		600/440/360		650/500/410	
Sound pressure level (h/m/l)	dB(A)	38/33/26		40/37/32		46/41/35	
Power supply	V/Ph/Hz	1/220-240/50		1/220-240/50		1/220-240/50	
Running consumption	W	30		30		30	
Refrigerant type		R410A		R410A		R410A	
Liquid pipe diameter	mm (inch")	6,35 (1/4)		6,35 (1/4)		6,35 (1/4)	
Gas pipe diameter	mm (inch")	9,52 (3/8)		9,52 (3/8)		12,70 (1/2)	
Net weight indoor	Kg	16		16		16	
Net dimension indoor (HxWxD)	mm	700x215x600		700x215x600		700x215x600	

Installation dimensions  
blocks underceiling type



## Controllers CASTLE series

	ПУЛЬТЫ УПРАВЛЕНИЯ								
Picture									
Description	Wireless remote controller	Wireless remote controller	Wired remote controller	Wired remote controller	Group controller	Smart zone controller	Centralized controller	Control by PC	Smart Home
Model	RVR-C-Y512	RVR-C-YB-1FA	RVR-C-Z63351F/ Z60351*	RVR-C-XK02	RVR-C-ZJA011	RVR-C-CE50-24/E	RVR-C-CE51-24E(M)	RVR-C-PC	RVR-C-BMS Interface (Modbus)
Functions									
	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C
	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C
	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 116/30 °C	 16/30 °C	 16/30 °C	 16/30 °C	 16/30 °C
		 16/30 °C		 16/30 °C					
									
	 temperature +/-	 temperature +/-	 temperature +/-	 temperature +/-	 temperature +/-	 temperature +/-	 temperature +/-	 temperature +/-	 temperature +/-
	 deflector	 deflector	 deflector	 deflector	 deflector		 deflector	 deflector	 deflector
			 Error display	 Error display	 Error display	 Error display	 Error display	 Error display	 Error display
							 7 дней Weekly timer	 7 дней Weekly timer	 7 дней Weekly timer
Max. Nos of outdoor units	-	-	-	-	-	-	64	n*255	n*255
Max. Nos of wired controller	1	1	1	1	16	16	1024	n*255*16	n*255*16
Max. Nos of indoor units	1	1	1	1	16	16	1024	n*255*16	n*255*16
Shielding			Shielding	Shielding	Shielding	Shielding	Shielding	Shielding	Shielding
					Centralized shielding	Centralized shielding	Centralized shielding		
							Group shielding		



**ROVER company** was established in 1999 in Germany. Initially, only ventilation equipment was being developed and manufactured. Later sphere of interests and services provided by the company enlarged, so central air handling units and different types of fan coil units were offered for domestic and external markets.

Strong construction base and development of our own scientific research center allow to make products that match both international quality standards and climatic features of different geographic regions of the planet, as well as to modernize existing types of equipment and to produce new ones. Main ROVER factories are located in Germany and Italy. The factories that cooperate with ROVER brand by contract manufacturing pass the most rigorous selection.

The company doesn't rest on its laurels and today enters the market of VRF systems with ROVER VRF product range. Also the company offers equipment for heating office and industrial rooms – air curtains and infrared heating panels.

Success of the ROVER products has its reason in implementation of the quality program "ROVER High Quality Climate", developed by company experts. Its requirements accord to German industry standards. This program holds to strict quality parameters of the produced equipment and its aftersales service. Only high quality components and materials are used in manufacturing. All factories included in production process have modern machinery. Testing of each unit of equipment takes place at every stage of its production. Average lifetime of ROVER product is over 10 years.

ROVER climatic equipment has a 1-year standard and 3-year extended warranty of the manufacturing plant. Authorized service centers are organized to provide support for ROVER products maintenance. Timely delivery of spare parts and components is an essential part of aftersales service provided by the company. We gain special appreciation of the customers for opportunity to bring one's idea of comfort to life together with ROVER. Due to its technological achievements, ROVER company is considered to be one of the leaders in development and mass production of climatic equipment.

Cooperation with many European industrial designers allows to achieve excellent results in design of products under ROVER brand.

All ROVER equipment meets European EUROVENT standards and has ROSSTANDART Certificates of conformity.

ROVER company is known to the customers as a manufacturer of high quality climatic equipment.

ROVER manufactures and supplies wide range of HVAC equipment:

- duct, axial, roof, centrifugal, exhaust, high pressure and specific fans
- industrial fans
- compact monobloc AHU
- modular AHU
- with-case and concealed floor/ceiling fan coil units
- cassette, duct (including duct with high static pressure) and ceiling fan coil units
- VRF systems
- infrared heating panels
- air curtains
- accessories and additional equipment

Traditional German quality, modern design, wide range of equipment and accessories allows to perform the most complicated project tasks.

\* When choosing equipment, ROVER recommends to use the services of technical specialists in authorized companies, which will make the necessary calculations and select the appropriate models in short terms.





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